

REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on May 29, 2002, and the documents cited therewith.

Claims 1-6, 9-10, and 14-19 are amended, and claims 27-39 are added; as a result, claims 1-39 are now pending in this application.

Drawing Objections

The Examiner objected to Figures 3, 4, and 9 because the reference sign(s) 370, 470, and 940, respectively, were not mentioned in the description. The above-proposed amendments to the specification overcome the objection to Figures 3, 4, and 9. The above amendments to the specification mention the reference sign(s) 370, 470, and 940 in the description of Figures 3, 4, and 9, respectively.

Amendments to the Specification

Applicant has carefully reviewed and edited the entire specification for accuracy and consistency of terminology and grammar. Applicant has also corrected a number of typos. In addition, Applicant has made several amendments to the specification and the claims to conform the written description to the drawings and vice versa. Some of the amendments provide text explaining operation of the invention, and not how to make and use the invention. Further, Applicant has amended the specification to overcome the Examiners objection to Figures 3, 4, and 9. No new matter has been added by way of these amendments.

Claim Objections

Claims 9 and 10 were objected to due to informalities. It is believed that the amendments made herein to claims 9 and 10 obviate these objections.

§102 Rejection of the Claims 1-5, 7, 9-17, 20 and 22-26

Claims 1-5, 7, 9-17, 20 and 22-26 were rejected under 35 USC § 102(b) as being anticipated by Wood et al. (U.S. 5,675,149) and incorporated by reference Wood (U.S. 5,420,419). Applicant traverses the rejection of claims 1-5, 7, 9-17, 20 and 22-26 as follows:

Wood et al., and incorporated reference Wood in FIG. 6 and in column 6, lines 18-34 discloses IR imaging techniques that supplies a single pulse biased current during a frame time to each microbolometer in two-dimensional arrays. In addition, Wood in column 5, and lines 47-35 disclose outputting a single resulting signal during a frame time.

In contrast, amended claims 1 and 14 in the present application recite IR imaging that applies two or more bias pulses substantially sequentially during a frame time to each microbolometer in the array. In addition, claims 1 and 14 recite measuring two or more resulting signals associated with the applied two or more bias pulses.

Amended claims 4-5 and 9-10, and claims 7 and 11-13 depend directly or independently from independent claim 1, so they should also be allowable for the reasons stated above. Amended claims 15-17, and claims 20 and 22-26 depend directly or indirectly from independent claim 14, so they should also be allowable for the reasons stated above. Wood et al do not disclose application of two or more bias pulses to each of the microbolometers in the array and measuring of two or more resulting signals in a frame time.

For the above reasons, claims 1-5, 7, 9-17, 20, and 22-26 should be found to be allowable over Wood et al., and Applicant respectfully requests that the rejection of claims 1-5, 7, 9-17, and 22-26 anticipated by Wood et al. and incorporated reference Wood should be withdrawn.

New claims 27-39 are also asserted to be allowable for the reasons stated above.

§103 Rejection of the Claims 6,18, and 19

Claims 6, 18 and 19 were rejected under 35 USC § 103(a) as being unpatentable over Wood et al. (U.S. 5,675,149) and incorporated by reference Wood (U.S. 5,420,419) in view of Thiede et al. (U.S. 5,129,595). Applicant respectfully traverses the rejection of claims 6, 18 and 19 as follows:

Wood et al. do not teach correcting output signal for image defects. Thiede et al. teach correcting image signal only for gain non-uniformity.

In contrast, amended claims 6 and 18 recite correcting an output signal for image defects, such as fine offsets, gain non-uniformity, and/or dead pixels Thiede et al. do not teach correcting an output signal for image defects, such as fine offsets and dead pixels.

Amended claims 6 and 18 further depend indirectly from independent claims 1 and 14, respectively. In addition, Wood et al. and Thiede et al. do not disclose application of two or more bias pulses to each of the microbolometers in the array and measuring of two or more resulting signals in a frame time for IR imaging. Again, Applicant respectfully repeats the arguments presented above for claims 1 and 14 in support of patentability of claims 6 and 18.

Claim 19, which depends directly on claim 18 and indirectly on claim 14 should be found allowable over Wood et al. and Applicant respectfully requests that the rejection of claim 19 as unpatentable over Wood et al. and Thiede et al. should be withdrawn.

Applicant respectfully assert that Wood et el. and Thiede et al. fail to support a *prima facie* case of obviousness because, as mentioned above, the recited references fail to teach or suggest all of the above elements of Applicant's invention.

For the above-stated reasons, claims 6, 18, and 19 should be found to be allowable over Wood et al. and Thiede et al. and Applicant respectfully request that the rejection of claims 6, 18, and 19 as unpatentable over Wood et al. and Thiede et al. be withdrawn.

New claims 27-39 are also asserted to be allowable for the reasons stated above.

§103 Rejection of the Claims 8 and 21

Claims 8 and 21 were also rejected under 35 USC § 103(a) as being unpatentable over Wood et al. and incorporated by reference Wood in view of Duvall, III (U.S. 5,258,619). Applicant respectfully traverses the rejection of claims 8 and 21 as follows:

Duvall, III discloses a radiation detector that applies a single non-steady bias pulse during a frame time to a detector in claim 1, lines 12-13, claim 3, line 26, claim 6, lines 6-8, and claim 7, lines 16-17, and claim 8, line 20. In addition, Duvall, III discloses varying the waveform parameters of a single square-wave or step pulse applied during a frame time in column 6, lines 17-19 and lines 49-53.

In contrast, claims 8 and 21 disclose an IR imaging technique that includes applying two or more bias pulses substantially equally spaced in time during a frame time.

In addition, claims 8 and 21 depend directly and indirectly from independent claims 1 and 14, respectively, so they should also be allowable for the reasons stated above with reference to independent claims 1 and 14. Duvall, III does not disclose application of two or more bias pulses to each of the microbolometers in the array and measuring of two or more resulting signals in a frame time.

Applicant respectfully assert that Wood et al. and Duvall, III fail to support a *prima facie* case of obviousness because, as mentioned above, the recited references fail to teach or suggest all of the above elements of Applicant's invention.

For the above reasons, claims 8 and 21 should be found to be allowable over Wood et al. and Duvall III, and Applicant respectfully requests that the rejection of claims 8 and 21 as unpatentable over Wood et al. and Duvall, III be withdrawn.

New claims 27-39 are also asserted to be allowable for the reasons stated above.

AMENDMENT AND RESPONSE UNDER 37 C.F.R. 1.111

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Filing Date: March 6, 2001

Title: IMPROVED RADIOMETER OPERATION USING FAST SCANNING

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Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney ((603) 888-7958) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

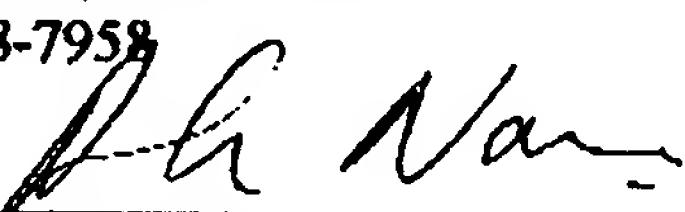
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 29th day of August, 2002.

Anne M. Richards

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Signature

